

Newark, New Jersey

Diamond Alkali Superfund Site (DASS)

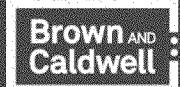
Discussion on RER Comments from EPA

OU-1

May 10, 2021



Remedy Evaluation Report Discussion



Discussion Outline

- General Comments
- Availability of Disposal Facilities (Excavation Alternative)
- Groundwater-Related Comments

General Comments



EPA Comments #3, #68 and #69

EPA suggestion to expand the RER to include impacts in native soil beneath the organic silt layer

- The RAOs identified by EPA focus on the reduction of COC migration from the impacted fill materials
- The deeper aquifer is not part of OU1 Remedy
- Deep groundwater contamination is a regional issue with multiple different Responsible Parties (See Slides 14 through 19)
- The revised text of the RER will more clearly state what instances of contamination the current Remedy and the alternatives are intended to address

EPA Comment #36

Potential Staffing and Funding

- Details of staffing and funding of the existing remedy are beyond the scope of an FS
- The operations of the GWTS will be staffed as deemed appropriate to meet project objectives
- Financial Assurance has been established for OU1, as required by the Consent Decree Section XVIII

Availability of Disposal Facilities (Excavation Alternative)



EPA Comments #80, #84c

Basis for stating that Domestic Waste Disposal Facilities will likely not accept waste from DASS

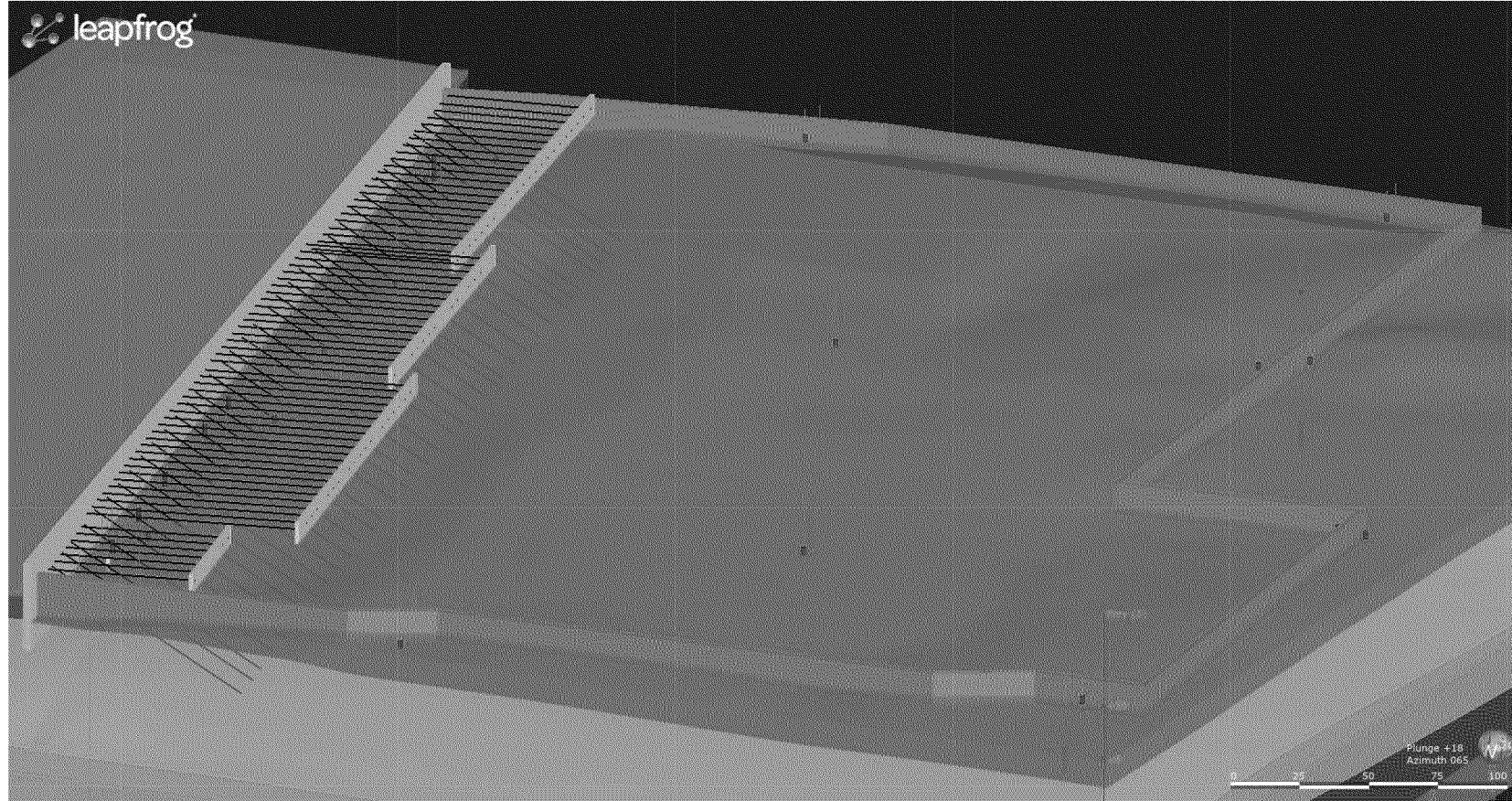
- Many site contaminants exist at concentrations above Universal Treatment Standards (UTS), which would prohibit disposal in a Subtitle C landfill
 - At least 35 contaminants above UTS, including dioxin, VOCs, SVOCs, pesticides, and metals
- Currently no domestic incinerators that are permitted to accept F-listed waste with concentrations above UTS
- For further detail, refer to the Waste Evaluation Tech Memo dated February 14, 2019 (Appendix B of RER)

EPA Comments #84d

Phased Excavation Next To Floodwall

- Tie-rods and Tie-backs are spaced only 8-feet apart and attached to deadmen within the contained area (See Slide 10)
- Adding to these complexities is the presence of the original bulkhead which is now buried behind the flood wall
- These structures make even a phased excavation near the floodwall impracticable and extremely costly.

Subsurface Obstructions



Groundwater-Related Comments



EPA Comments #13, #32

Off-Site Sources of Contamination

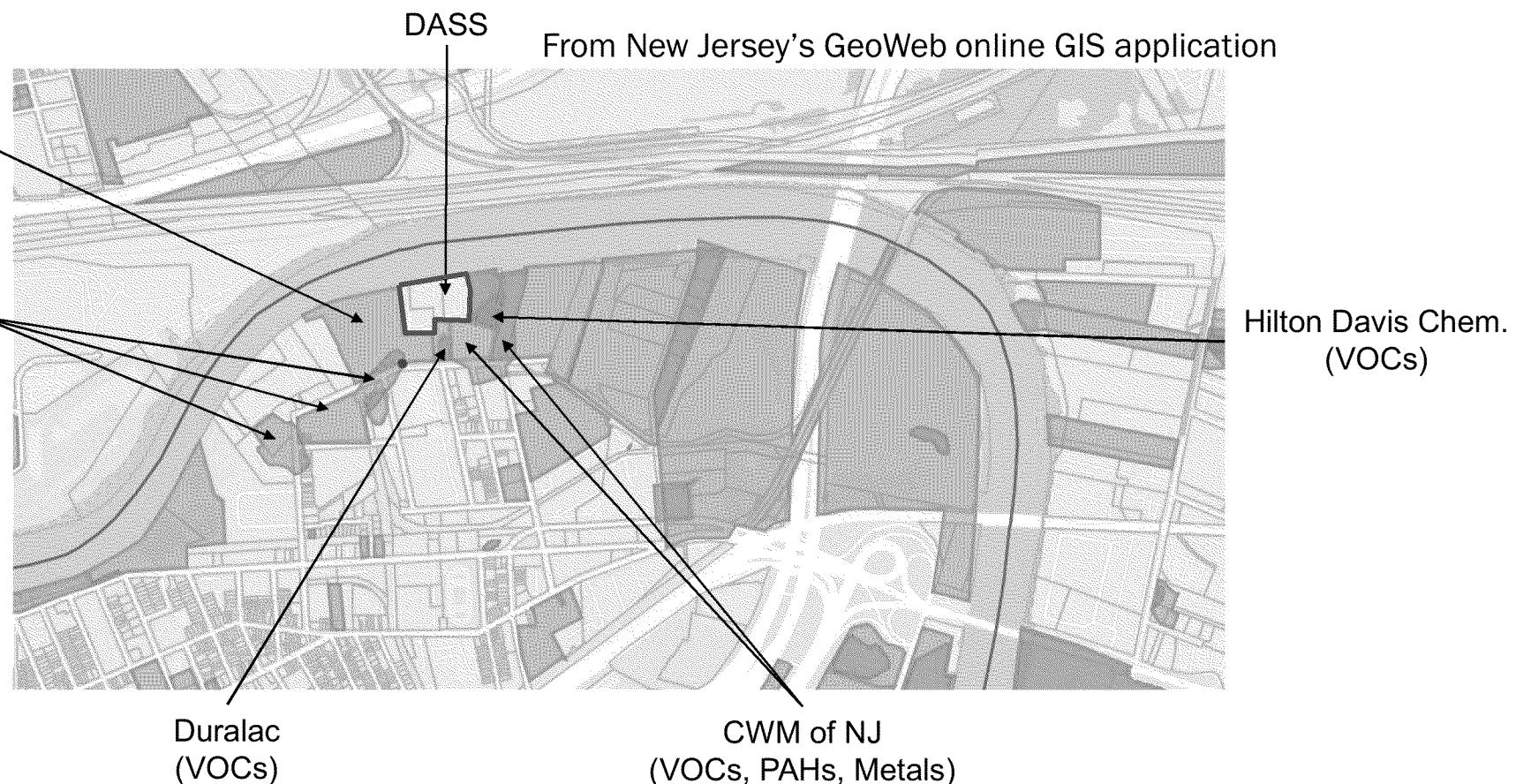
- Multiple lines of evidence indicate the likelihood of the comingled of plumes
- Sources of like-COCs have been confirmed on several neighboring properties with groundwater flows towards DASS
- In some instances, chemical signatures in the deep glaciofluvial sand are inconsistent with DASS COCs, further indicating contamination from off-site sources under DASS
- See Slides 14 through 19
- RER will be revised to discuss comingled plumes versus solely off-site sources

EPA Comments #13, #32 Continued

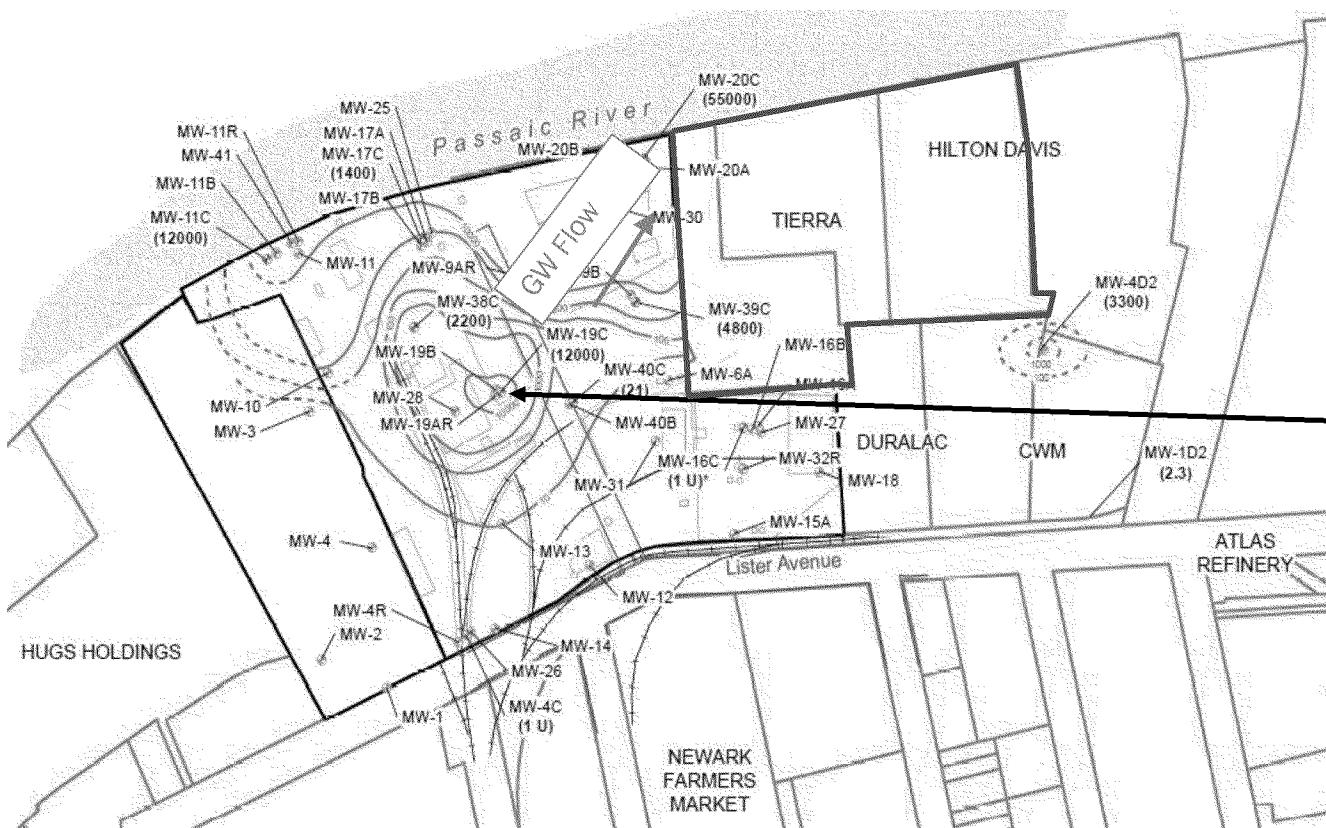
Off-Site Sources of Contamination

- Document Sources for Sherwin Williams:
 - Supplemental Groundwater Investigation Report; Former Sherwin-Williams Newark Plant and Former Copco Property; 60 Lister Avenue; by Weston Solutions dated February 2017
- Document Sources for Chemical Waste Management of NJ:
 - Remedial Investigation Report; SC Holdings Inc. 100 Lister Avenue by Tetra Tech dated December 4, 2015
 - Remedial Action Report; SC Holdings Inc. 100 Lister Avenue by Tetra Tech dated August 2019

Nearby Groundwater Classification Exception Areas



Sherwin Williams



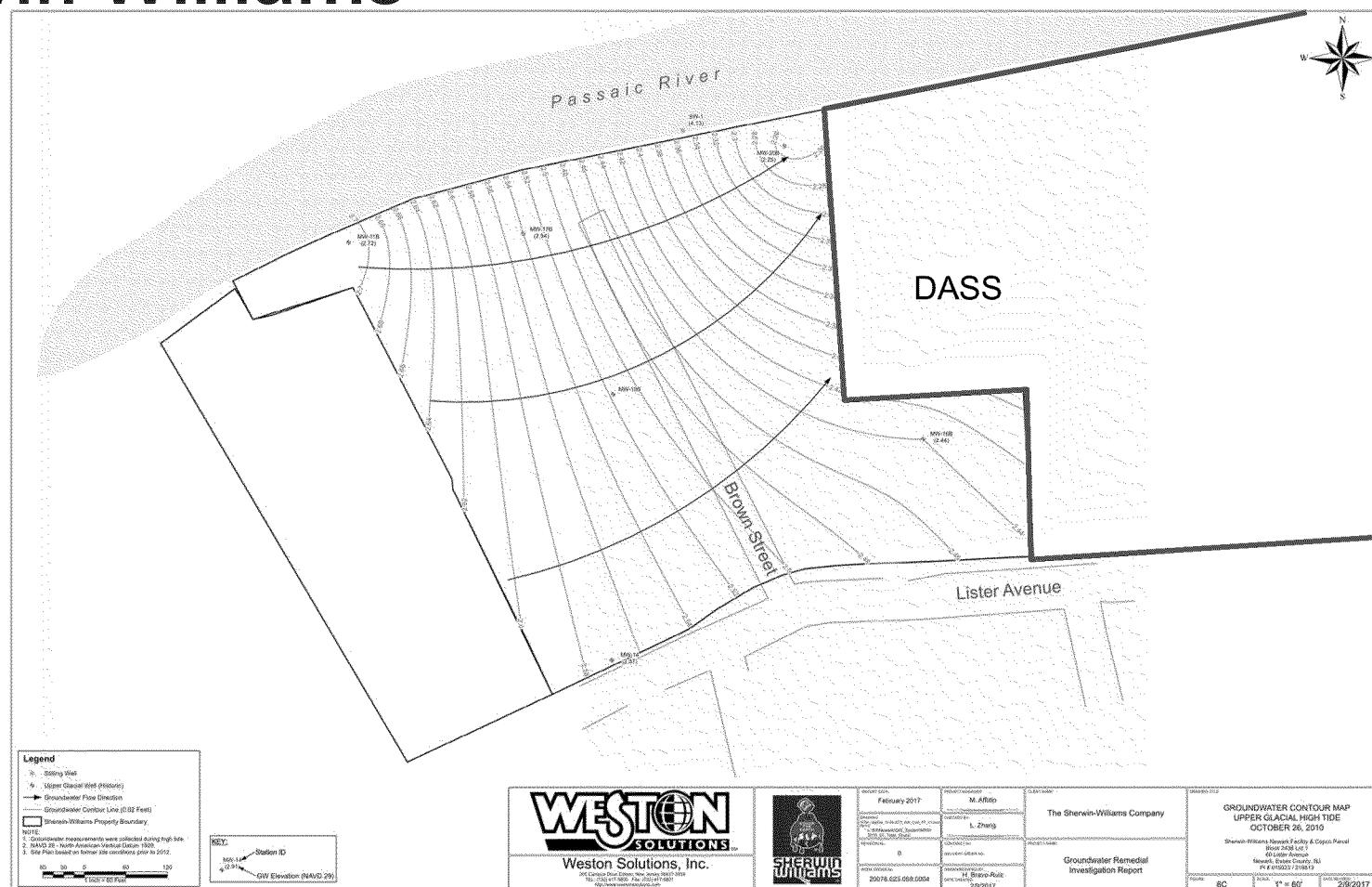
SVOCs

03/15/01	1,4-DICHLOROBENZENE	860
04/17/01	1,4-DICHLOROBENZENE	920
01/22/03	1,4-DICHLOROBENZENE	1300
04/24/03	1,4-DICHLOROBENZENE	970
07/17/03	1,4-DICHLOROBENZENE	840
10/02/03	1,4-DICHLOROBENZENE	980
03/24/05	1,4-DICHLOROBENZENE	1100
08/09/07	1,4-DICHLOROBENZENE	870
03/15/01	2-CHLOROPHENOL	55
04/17/01	2-CHLOROPHENOL	61
03/15/01	2,4-DICHLOROPHENOL	32
03/15/01	2,4,6-TRICHLOROPHENOL	21
03/15/01	BIS(2-ETHYLHEXYL) PHthalate	6.9

VOCS

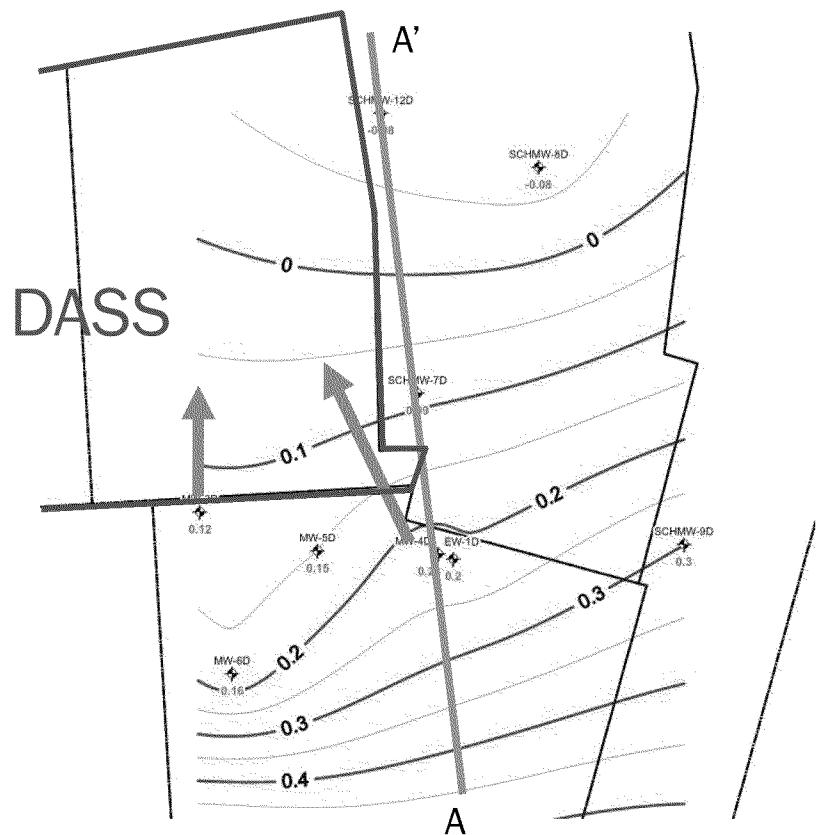
03/15/01	BENZENE	460
04/17/01	BENZENE	400
01/22/03	BENZENE	320
04/24/03	BENZENE	520
07/17/03	BENZENE	410
10/02/03	BENZENE	420
03/24/05	BENZENE	420
08/09/07	BENZENE	310
03/15/01	CHLOROBENZENE	16000
04/17/01	CHLOROBENZENE	12000
01/22/03	CHLOROBENZENE	12000
04/24/03	CHLOROBENZENE	12000
07/17/03	CHLOROBENZENE	10000
10/02/03	CHLOROBENZENE	13000
03/24/05	CHLOROBENZENE	15000
08/09/07	CHLOROBENZENE	14000

Sherwin Williams



Brown and Caldwell

Chemical Waste Management



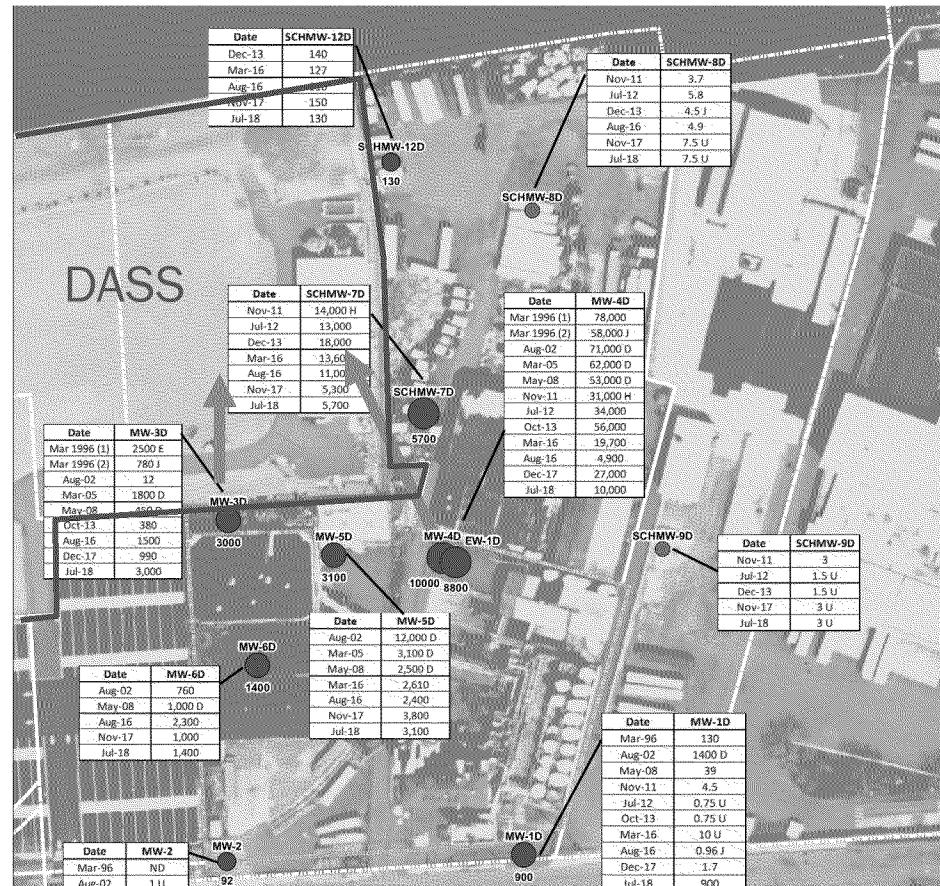
Potentiometric Surface in the Upper
Glaciofluvial Zone

(From Remedial Action Report
prepared for SC Holdings by
TetraTech dated August 2019)

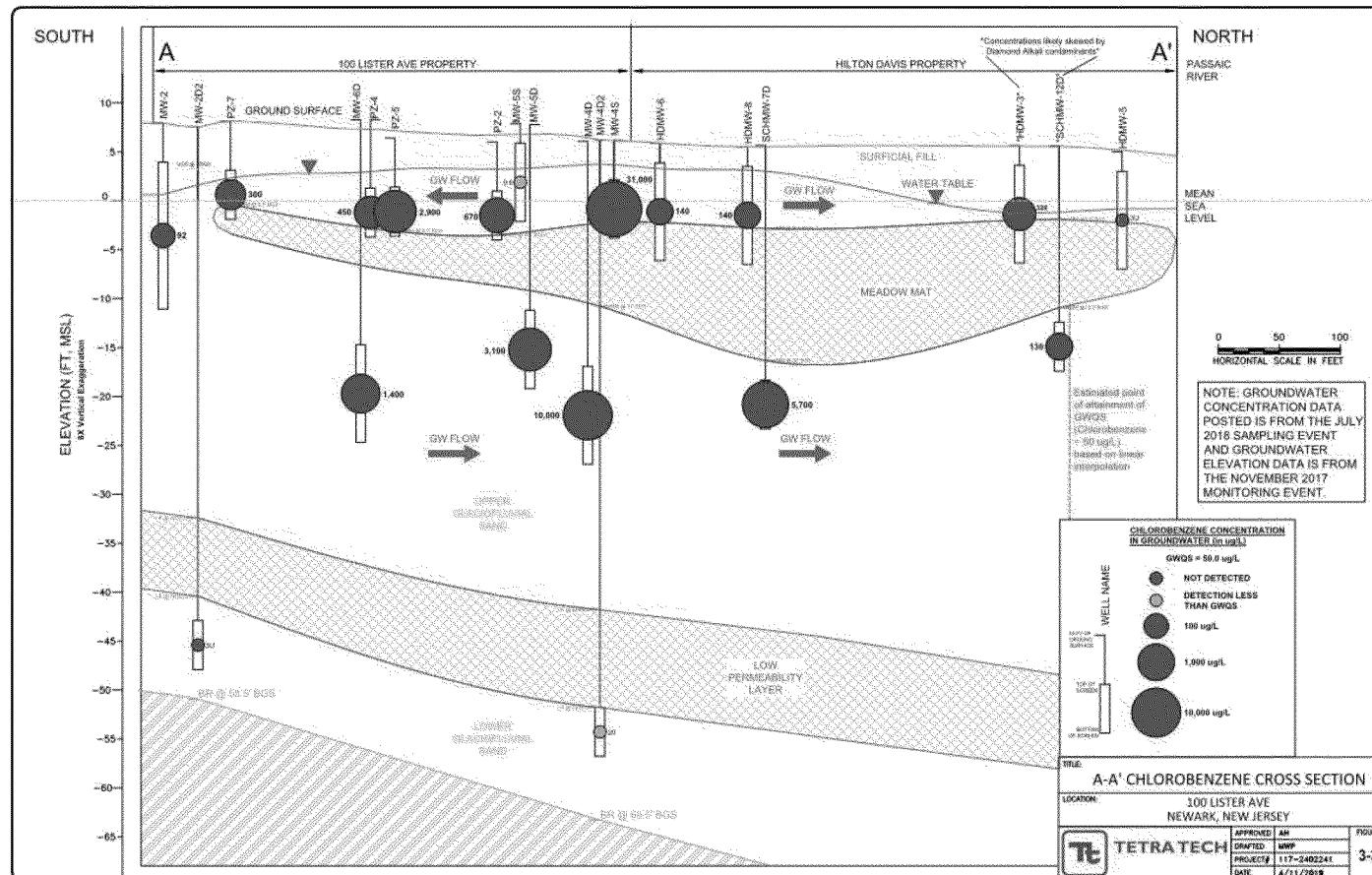
Chemical Waste Management of New Jersey

Chlorobenzene Concentrations in the Upper Glaciofluvial Zone

(From Remedial Action Report prepared for SC Holdings by Tetra Tech dated August 2019)



Chemical Waste Management of New Jersey



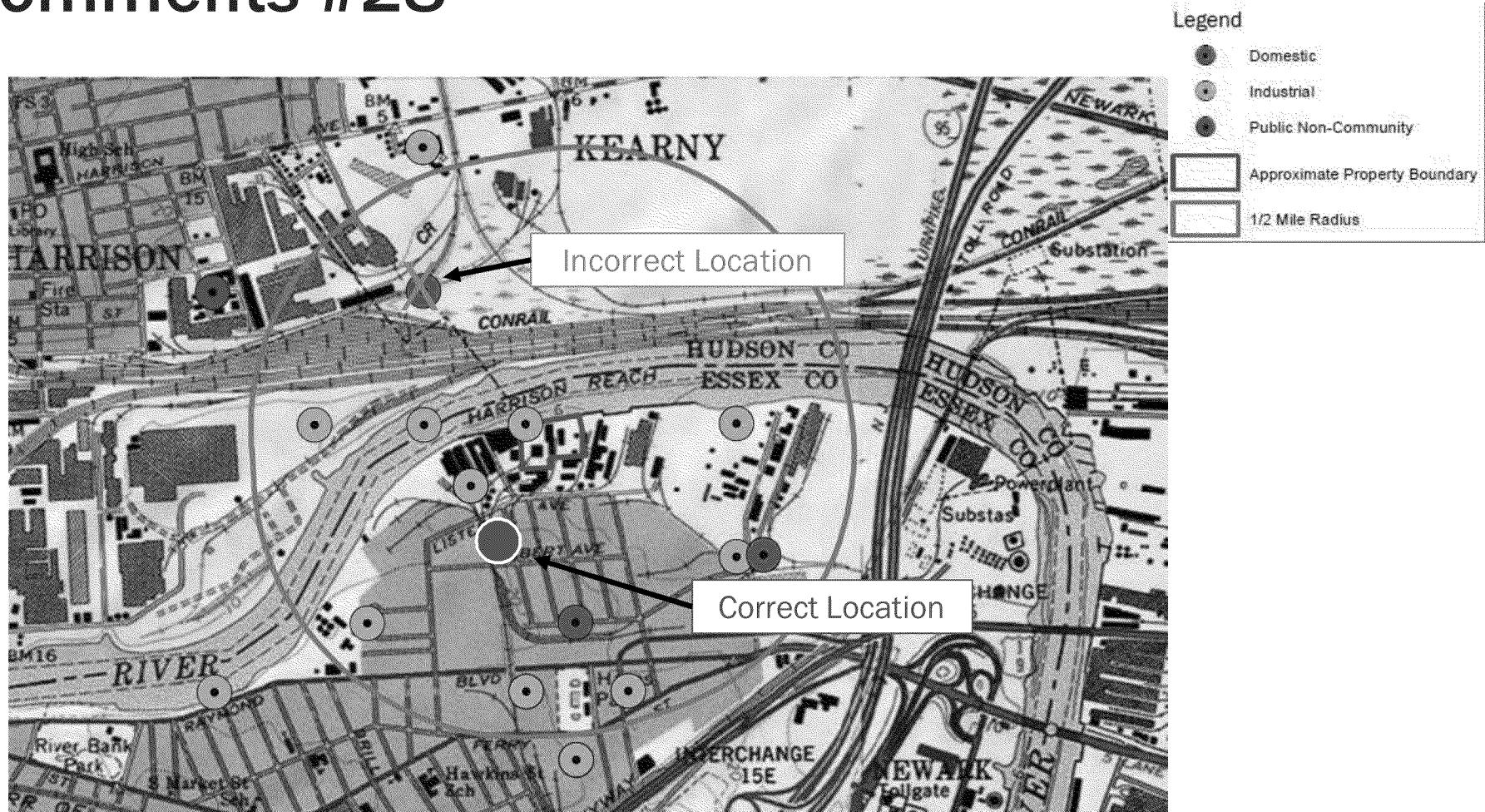
From Remedial Action Report prepared for SC Holdings by TetraTech dated August 2019

EPA Comments #28

Potential COC Migration toward the domestic well Identified north of the Passaic River

- NJDEP BWA coordinates for this domestic well are incorrect (installed in 1981)
- BWA coordinates place this well historically within a railroad yard and currently under Route 280 (i.e., not likely!)
- Review of Lot and Block number included in NJDEP well records place this domestic well south of the River and south of the former Sherwin Williams site
- The location of the domestic well will be corrected in the final RER well search figure (See Slide 21)

EPA Comments #28



EPA Comments #30.2

Was the head differentials indicated by the groundwater level monitoring continuous, or did it change based on tidal or weather conditions?

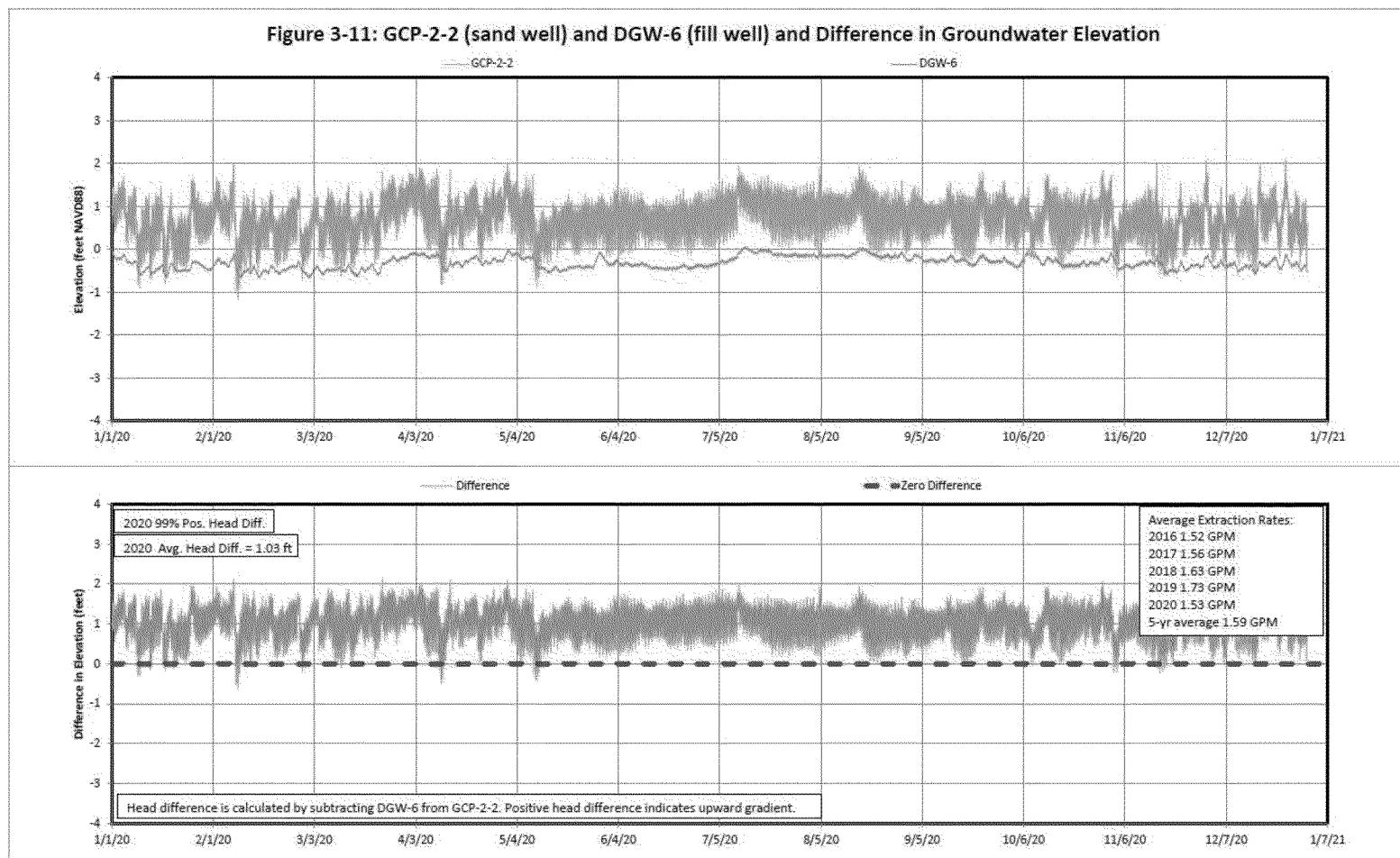
- Changed based on both tidal and weather conditions, with greater fluctuations occurring outside the containment area
- The RER will be revised to better describe groundwater level fluctuations

EPA Comments #30.3

Upward gradients vs. downward migration

- Upward gradients do prevent the downward migration of dissolved-phase contamination. Can EPA provide the basis for the contrary statement provided in the response?
- Hydraulic gradients at the site are determined by comparing heads measured in the fill to heads measured in the glaciofluvial sand below the organic silt. It is not measured between the surficial cap and the organic silt layer as stated in the comment.

EPA Comments #30.3



EPA Comments #30.4

What is the origin of CB and DCB in the glaciofluvial sand in the vicinity of GCP 1-1 and 1-2 and how does it impact the Remedy?

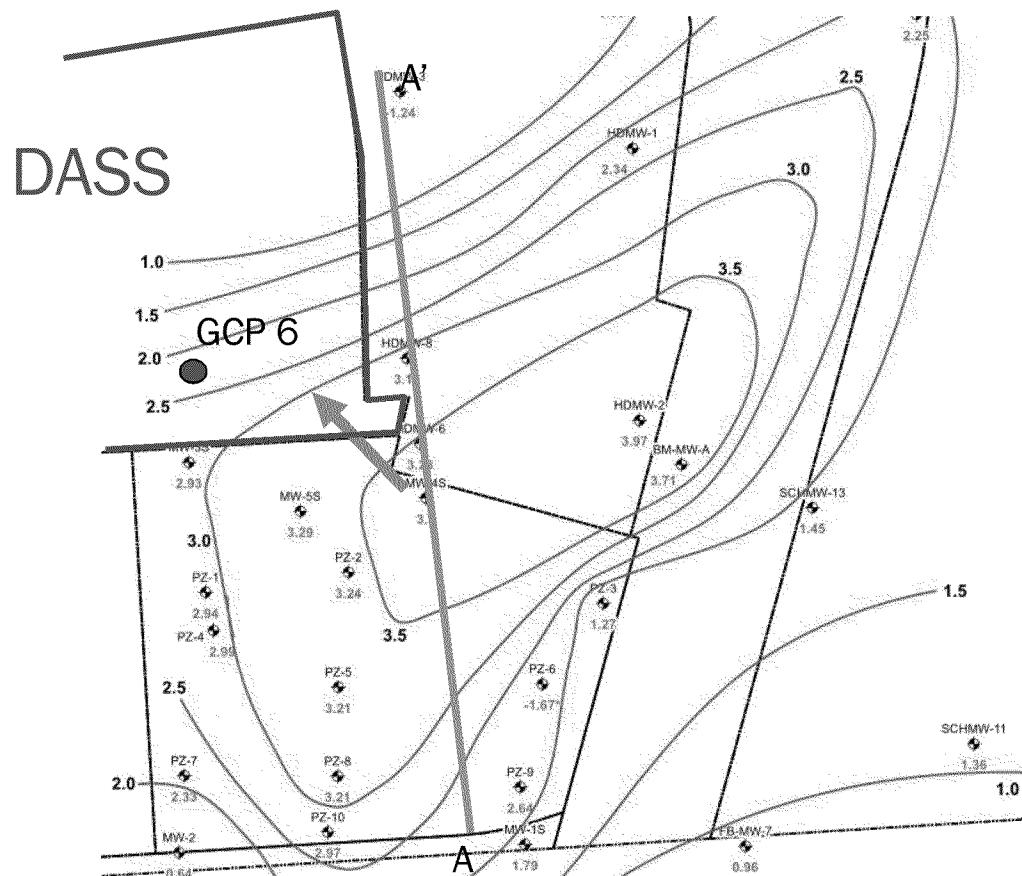
- CB and DCB originate from both DASS and from upgradient offsite sources and, in particular, from the Sherwin Williams site based on groundwater flow directions presented in Sherwin Williams reports (See Slides 15 and 16)
- The occurrence of CB and DCB in the glaciofluvial sand does not impact the Remedy's ability to meet RAOs, which involve reduction in mass transport of chemicals through containment and extraction of groundwater above the organic silt

EPA Comments #31

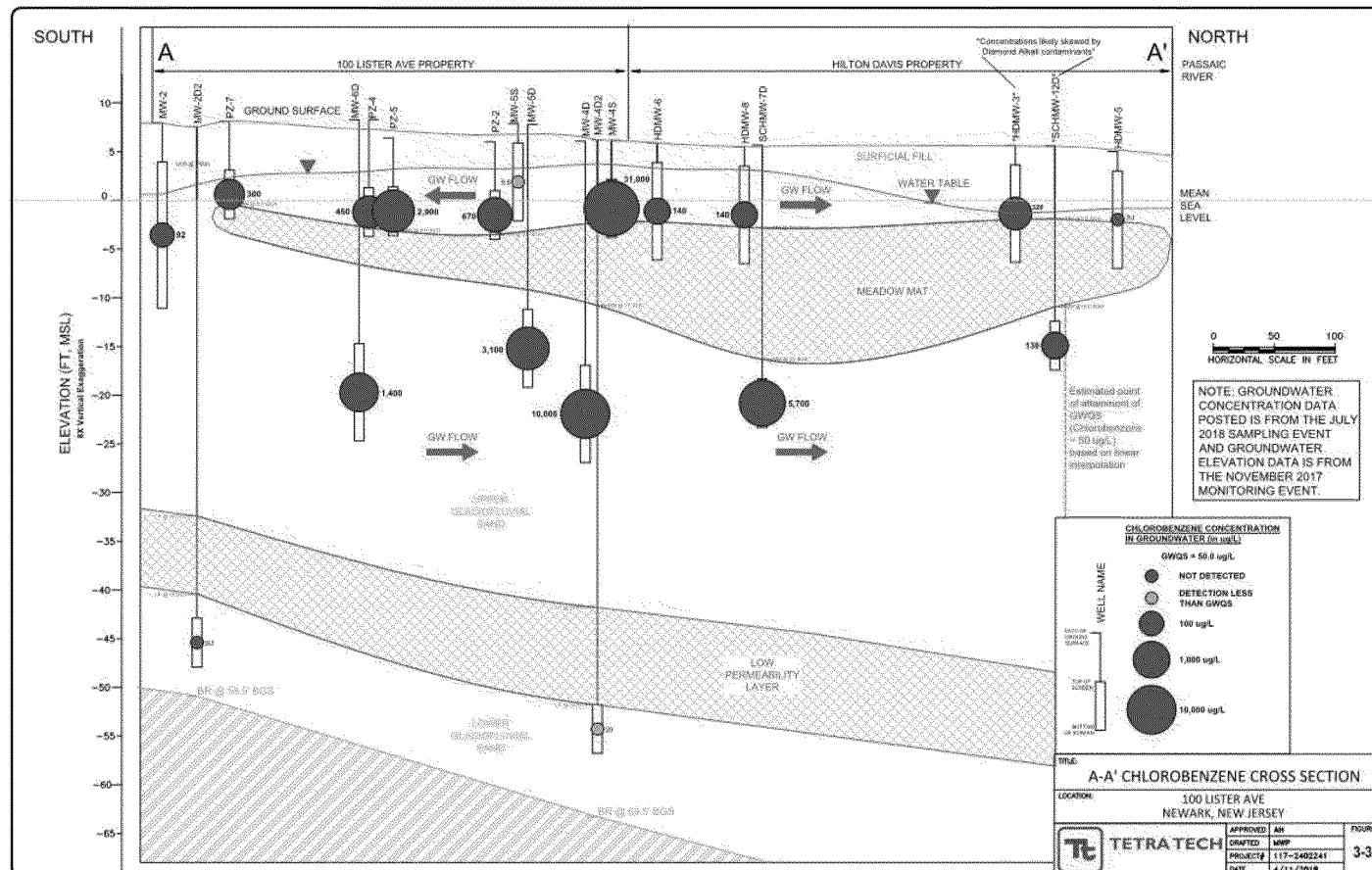
Contaminants in GCP 6-3 (Outside the barrier wall)

- Groundwater potentiometric flow maps prepared on behalf of Chemical Waste Management of New Jersey indicate that a flow path from CWM's MW-4S/4D to GCP 6-3 is possible (See Slides 27 and 28)
- Regardless of the source of the VOCs outside the slurry wall, the RAOs are being achieved by DASS by maintaining an inward gradient at these locations

Chemical Waste Management of New Jersey



Chemical Waste Management of New Jersey



From Remedial Action Report prepared for SC Holdings by TetraTech dated August 2019

Brown and Caldwell

EPA Comments #40, #104

Increasing pumping rates

- Pumping rates are generally maximized because rates are controlled by well recharge, not pump speed/size or forcemain piping
- Other opportunities to optimize the groundwater extraction system are being evaluated. Evaluations include lowering pump intake elevations, increasing cycling frequency, different pump type, real time pumping sensors, etc.

EPA Comments #85

Determining the Duration of the Groundwater Remedy

- Due to the nature of the remedy, which includes containment of contaminated soil through physical barriers and hydraulic control, the duration is considered indeterminant

